with a protrusion 5 projecting toward the second die hole 40, whereas a gap 10 for injecting the second coating resin B into the second die hole 40 is formed between the first coating die 3 and the second coating die 4. The first die hole 30 is constituted by a taper portion T_p and a cylindrical land portion L_p, formed continuously therewith, having a smaller inside diameter.

IN THE CLAIMS:

Please amend the claims as follows:

3. An optical fiber coating apparatus for applying first and second coating resins as laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted, a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber, wherein said first die hole comprising a taper portion and a cylindrical land portion formed continuously therewith, a lower aperture of said land portion is opened in said lower end face, and said first die hole and the outer periphery of said optical fiber therein forms a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular low-pressure region formed around said optical fiber in a flow of said second coating resin within said gap; and wherein

said apparatus satisfies:

$0.05G<H<0.5G$

wherein H is the height of said protrusion, and G is the distance of the gap between said first and second coating dies.

5. An optical fiber coating apparatus for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap; and said protrusion is shaped like a circular truncated cone, wherein said apparatus satisfies:

$0.05G < H < 0.5G$

$(D_2 - D_1)/2 < W < G$

0.01 mm $L < W$

where H is the height of the circular truncated cone of said protrusion, W is the distance between the outer periphery of the bottom portion of said circular truncated cone and the inner peripheral face of said first die hole, L is the distance between the outer periphery of a head portion of said circular truncated cone and the inner peripheral face of said first die hole, D_1 is the inner peripheral face diameter of said first die hole on the outlet side of said optical fiber, D_2 is the inner peripheral face diameter of said second die hole on the inlet side of said optical fiber, and G is the distance of the gap between said first and second coating dies.

6. An optical fiber coating apparatus for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected;

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein; and

a positioning member having a cylindrical inner peripheral face adapted to fit the respective outer peripheral faces of said first and second coating dies,

each of said first and second coating dies and the inner peripheral face of said positioning member being constituted by a material having a Young's modulus of 5×10^4 kg/mm^2 or greater and a coefficient of thermal expansion of 6×10^{-6}/°C or lower,

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap

and wherein said apparatus satisfies:

$$0.05G < H < 0.5G$$

wherein H is the height of said protrusion, and G is the distance of the gap between said first and second coating dies.

12. An optical fiber coating apparatus for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole comprising a taper portion and a cylindrical land portion formed continuously therewith, a lower aperture of said land portion is opened in said lower end face, and

said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to

form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap, and said apparatus satisfying

$0.05G < H < 0.5G$

$(D_2 - D_1)/2 < W < G$

where H is the height of the circular truncated cone of said protrusion, W is the distance between the outer periphery of the bottom portion of said circular truncated cone and the inner peripheral face of said first die hole, D_1 is the inner peripheral face diameter of said first die hole on the outlet side of said optical fiber, D_2 is the inner peripheral face diameter of said second die hole on the inlet side of said optical fiber, and G is the distance of the gap between said first and second coating dies.

13. An optical fiber coating apparatus for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole comprising a taper portion and a cylindrical land portion formed continuously therewith, a lower aperture of said land portion is opened in said lower end face, and said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap,

and said apparatus satisfying

$0.05G < H < 0.5G$

0.01 mm $L < W$

where H is the height of the circular truncated cone of said protrusion, W is the distance between the outer periphery of the bottom portion of said circular truncated cone and the inner peripheral face of said first die hole, L is the distance between the outer periphery of the head portion of said circular truncated cone and the inner peripheral face of said first die hole, and G is the distance of the gap between said first and second coating dies.

Please add the following new claims:

14. An optical fiber coating apparatus for applying first and second coating resins as laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted, said first coating die comprising a lower end face that is substantially planar save for a protruding structure projecting outwardly from the lower end face, said protruding structure being substantially concentrically arranged about said first die hole; and

a second coating die having a second die hole which is substantially concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a substantially planar plate opposing the lower end face of said first coating die so as to define a gap between the upper end face of the second coating die and the lower end face of the first coating die,

wherein said first coating resin is input into an annular space formed between an inner surface of said first die hole and an outer periphery of said optical fiber,

wherein said second coating resin is input through said gap between the upper end face of the second coating die and the lower end face of the first coating die and into an annular space formed between an inner surface of said second die hole and an outer periphery of the optical fiber having a first coating resin disposed thereover, and

wherein said protruding structure is dimensioned so that the largest dimension thereof inclusive of an outer radius and a height is less than a dimension of said gap between the first coating die lower end face and a second coating die to thereby reduce an annular low-pressure region formed around said optical fiber in a flow of said second coating resin within said gap.

15. An optical fiber coating apparatus for applying first and second coating resins as laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted, said first coating die comprising a lower end face that is substantially planar save for a protruding structure projecting outwardly from the lower end face, said protruding structure being substantially concentrically arranged about said first die hole; and

a second coating die having a second die hole which is substantially concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a substantially planar plate opposing the lower end face of said first coating die so as to define a gap between the upper end face of the second coating die and the lower end face of the first coating die,

wherein said first coating resin is input into an annular space formed between an inner surface of said first die hole and an outer periphery of said optical fiber,

wherein said second coating resin is input through said gap between the upper end face of the second coating die and the lower end face of the first coating die and into an annular space formed between an inner surface of said second die hole and an outer periphery of the optical fiber having a first coating resin disposed thereover, and

wherein said protruding structure is dimensioned so that the outermost radius thereof is less than a diameter of said first die hole.

16. An optical fiber coating apparatus for applying first and second coating resins as laminate to the outer periphery of an optical fiber, in accord with claim 14, wherein said apparatus is configured to provide a fiber linear velocity between about 500 m/min to about 1200 m/min.

17. An optical fiber coating apparatus for applying first and second coating resins as laminate to the outer periphery of an optical fiber, in accord with claim 14, wherein said apparatus is configured to provide a fiber linear velocity of approximately 1000 m/min.